WHAT IS CLAIMED IS:

1. A charge transfer path comprising:

a semiconductor substrate having a surface region of a first conductivity type;

a channel region formed in the surface region and extending as a whole along one direction (extension direction) on a surface of said semiconductor substrate, said channel region having a second conductivity type opposite to the first conductivity type and having a stripe plan shape defined by a pair of side edges;

an insulating film formed on said semiconductor substrate and covering said channel region; and

a plurality of transfer electrodes formed on said insulating film and traversing said channel region, said transfer electrodes having an overlap structure that end portions of adjacent transfer electrodes overlap to define a plurality of border lines of said channel region, and defining a plurality of charge transfer sections partitioned by the border lines in said channel region,

wherein each transfer channel region includes a region where a plurality of charge transfer sections are juxtaposed along a direction perpendicular to the extension direction.

2. A charge transfer path according to claim 1, wherein shapes of said channel region and said transfer electrodes are selected so that at least some of said border lines have an angle of 5° or large relative to the perpendicular direction.

3. A charge transfer path according to claim 1, wherein at least some of said border lines have a line segment generally parallel to the side edges.

4. A charge transfer path according to claim 1, wherein at least some of said charge transfer sections have a region whose width along the perpendicular direction changes monotonously.

5. A charge transfer path according to claim 1, wherein said channel region extends and periodically weaves along the extension direction, and at least some of the border lines have a line segment slanted by an angle of 5° or larger relative to the perpendicular direction in a region of said channel region slanted relative to the extension direction.

6. A charge transfer path according to claim 5, wherein adjacent charge transfer sections contact each other along a straight border line in the region of said channel region slanted relative to the extension direction.

7. A charge transfer path according to claim 1, wherein at least some of said charge transfer sections have each a wide region and a narrow region.

8. A charge transfer path according to claim 7, wherein the wide region is positioned at one end of said charge transfer section.

9. A charge transfer path according to claim 8, wherein adjacent charge transfer sections have both the wide region in a nearby area where the adjacent charge transfer sections contact.

10. A charge transfer path according to claim 7, wherein the narrow region reduces a width along the perpendicular direction more at a position remoter from the wide

region.

11. A solid state image pickup device, comprising:

(a) a semiconductor substrate defining a two-dimensional surface;

(b) a number of photoelectric conversion elements disposed on the surface of said semiconductor substrate along a plurality of rows and columns at constant pitches, said photoelectric conversion elements in an even column being shifted by about a half of a photoelectric conversion element pitch in the even column from said photoelectric conversion elements in an odd column, said photoelectric conversion elements in an even row being shifted by about a half of a photoelectric conversion element pitch in the even row from said photoelectric conversion elements in an odd row, and each photoelectric conversion element column including only said photoelectric conversion elements in either the odd column or the even column;

(c) a plurality of transfer channel regions formed on said semiconductor substrate, each being disposed near a corresponding photoelectric conversion element column, having a stripe plan shape defined by a pair of side edges, and extending and weaving along the column direction; and

(d) a plurality of transfer electrodes traversing said transfer channel regions and extending as a whole in the row direction, said transfer electrodes having an overlap structure that end portions of adjacent transfer electrodes overlap to define a plurality of border lines of said transfer channel region, and defining a plurality of charge transfer sections partitioned by the border lines in said channel regions,

wherein each transfer channel region includes a region where a plurality of charge transfer sections are juxtaposed along a direction perpendicular to

the extension direction.

12. A solid state image pickup device according to claim 11, wherein shapes of said channel region and said transfer electrodes are selected so that at least some of said border lines have an angle of 5° or large relative to the perpendicular direction.

13. A solid state image pickup device according to claim 11, wherein at least some of said border lines have a line segment generally parallel to the side edges.

14. A solid state image pickup device according to claim 11, wherein at least some of said charge transfer sections have a region whose width along the perpendicular direction changes monotonously.

15. A solid state image pickup device according to claim 11, wherein said channel region extends and periodically weaves along the extension direction, and at least some of the border lines have a line segment slanted by an angle of 5° or larger relative to the perpendicular direction in a region of said channel region slanted relative to the extension direction.

16. A solid state image pickup device according to claim 15, wherein adjacent charge transfer sections contact each other along a straight border line in the region of said channel region slanted relative to the extension direction.

17. A solid state image pickup device according to claim 11, wherein at least some of said charge transfer sections have each a wide region and a narrow region.

18. A solid state image pickup device according to claim 17, wherein the wide region is positioned at one end of said charge transfer section.

19. A solid state image pickup device according to claim 18, wherein adjacent charge transfer sections have both the wide region in a nearby area where the adjacent charge transfer sections contact.

20. A solid state image pickup device according to claim 17, wherein the narrow region reduces a width along the perpendicular direction more at a position remoter from the wide region.

21. A solid state image pickup device according to claim 11, wherein an area ratio between any two of the charge transfer sections is in a range from 1 : 1 to 1 : 5.

22. A method of driving a solid state image pickup device, comprising: a semiconductor substrate defining a two-dimensional surface; a number of photoelectric conversion elements disposed on the surface of the semiconductor substrate along a plurality of rows and columns at constant pitches, the photoelectric conversion elements in an even column being shifted by about a half of a photoelectric conversion element pitch in the even column from the photoelectric conversion elements in an odd column, the photoelectric conversion elements in an even row being shifted by about a half of a photoelectric conversion element pitch in the even row from the photoelectric conversion elements in an odd row, and each photoelectric conversion element column including only the photoelectric conversion elements in either the odd column or the even column; a plurality of transfer channel regions formed on the semiconductor substrate, each being disposed near a

corresponding photoelectric conversion element column, having a stripe plan shape defined by a pair of side edges, and extending and weaving along the column direction; and a plurality of transfer electrodes traversing the transfer channel regions and extending as a whole in the row direction, the transfer electrodes having an overlap structure that end portions of adjacent transfer electrodes overlap to define a plurality of border lines of the transfer channel region, and defining a plurality of charge transfer sections partitioned by the border lines in the channel regions, wherein each transfer channel region includes a region where a plurality of charge transfer sections are juxtaposed along a direction perpendicular to the extension direction, the method comprising the steps of:

(a) accumulating electric charges in the photoelectric conversion elements;

(b) applying a read level voltage to a first charge transfer section near the photoelectric conversion elements and applying a transfer high level voltage to a second charge transfer section adjacent to the first charge transfer section in the row direction; and

(c) changing the voltage applied to the first charge transfer section to the transfer high level voltage.

23. A method of driving a solid state image pickup device according to claim 22, wherein said steps (b) and (c) are repetitively executed relative to the photoelectric conversion elements in the odd and even rows.